

ABSTRACT OF THE DISCLOSURE

A wireless telephone system comprises a base unit coupleable to one or more external telephone lines and having a base transceiver, and a plurality of wireless handsets which may be active or inactive.

- 5 Each handset has a handset transceiver for establishing a time-division multiple access (TDMA) link, when said handset is active, over a shared RF channel with the base unit via the base transceiver. In communicating via a TDMA link, each active handset communicates during an exclusive time slice of a TDMA scheme that allocates time slices to active handsets, wherein a number of data samples having a sample size are transmitted during each time slice. At least two handsets alternately share a time slice, when one of said two handsets is to establish a new TDMA link and when establishing said new TDMA link would exceed the available channel capacity. Time slices are shared by reducing the sample size and thereby increasing the number of data samples transmitted during said shared time slices.
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